MNOSHA Update
GHS

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Another Acronym

- G Globally
- H Harmonized
- S System

of Classification and Labeling of Chemicals

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International Mandate for GHS

- The development of a harmonized hazard communication system, including labeling, Safety Data Sheets, and easily understandable symbols, based on the classification criteria developed for the GHS.

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Principles of Harmonization

- Protections will not be reduced; comprehensibility will be key.
- All types of chemicals will be covered; will be based on intrinsic properties (hazards) of chemicals.
- System changes will be made worldwide.

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Where Were You in 1992?

- Minnesota
  - Metrodome hosts Super Bowl XXVI, and NCAA Final Four
  - Mall of America opens
- U.S.
  - President Clinton defeats George HW Bush and Ross Perot
  - Johnny Carson leaves the Tonight Show

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- World –
  - Albertville, France hosts Winter Olympics, Barcelona, Spain hosts Summer Olympics
  - Ethnic cleansing in former Yugoslavia

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Blame it on Rio

And in Rio de Janeiro, Brazil, GHS was agreed to at the “Earth Summit”

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- Today it is an international agreement brokered through the United Nations (first committee adopted, December 2002).

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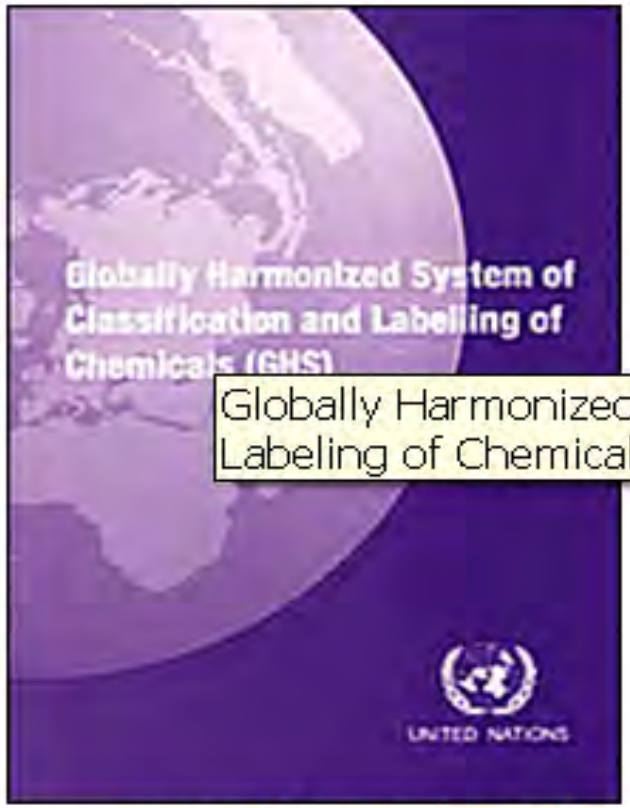
Purple Book



Globally Harmonized System of Cl
Labeling of Chemicals (GHS)

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

[Third revised edition | Fourth revised edition]

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Purple Book

- U.N.'s criteria is also known as the `Purple Book'
- Subcommittee of Experts meets every two years, last meeting was December 12-14, 2012
- Any changes will be published in the 5th edition
- The OSHA standard was based on criteria in the 3rd edition

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Canada

GHS implementation could impact all sectors (transport, industrial/workplace chemicals, consumer products, pest control products). Implementation plans are based on the first revised edition of the GHS (GHS-Rev.1, 2005).

Workplace	
Focal point:	Department of Health: National Officer of WHMIS (Workplace hazardous materials information system). Product Safety Programme
Main relevant legislation:	Hazardous Product Act and associated Controlled Products Regulations
Transport of dangerous goods	
Focal point:	Department of transport: Transport of Dangerous Goods Directorate
Main relevant legislation:	Transportation of Dangerous Goods Act, 1992 and Transportation of Dangerous Goods Regulations
GHS implementation status	**Implemented** Amendment 6 to the Canadian transportation of dangerous goods regulations entered into force on 20 February 2008, following its publication in Part II of the Canada Gazette

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United States of America

Workplace	
Focal point:	Department of Labor: Occupational Safety and Health Administration (OSHA)
Main relevant legislation:	Occupational Safety and Health Standards
GHS implementation milestones:	On **26 March 2012** the **revised Hazard Communication Standard (HCS)** was published in the Federal Register. The revised HCS is **in line with the third revised edition of the GHS**. It **will become effective on 25 May 2012** although it will not become mandatory until 1 June 2015. During this phase-in period, and to give industry enough time to produce labels and Safety Data Sheets (SDS) consistent with the revised provisions, employers will be allowed to use at their own discretion, the existing HCS, the revised one, or both. Additional information and guidance is available at OSHA's website
Transport of dangerous goods	
GHS implementation status	**Implemented** For international transport of dangerous goods, see Implementation through international legal instruments, recommendations, codes and guidelines For national transport: the regulations applicable to the transport of dangerous goods (Title 49 of the Code of Federal Regulations) have been updated to reflect the 15th revised edition of the UN Model Regulations, with very few exceptions.
Focal point:	Department of Transportation (DOT): Pipeline and Hazardous Materials Safety Administration (PHMSA)
Main relevant legislation:	Hazardous Materials Regulations (Title 49 CFR Parts 100 -185)
Pesticides	
Focal point:	Environmental Protection Agency (EPA): Pesticides Program (Office of Prevention, Pesticides and Toxic Substances)

Consumer Products	
Focal point:	Consumer Product Safety Commission (CPSC)
Main relevant legislation:	Consumer Product Safety Act Federal Hazardous Substances Act
GHS implementation milestones	In 2007, CPSC compared selected portions of the Federal Hazardous Substances Act (FHSA) regulatory requirements to the Globally Harmonized System (GHS) for classification and labeling. This comparison identified some of the technical differences between the FHSA and GHS. A preliminary legal feasibility assessment was also conducted to assess what, if any, changes would be needed to the FHSA should certain provisions of the GHS be adopted and implemented. The staff work indicated that a more complete technical comparison is needed. In 2008, CPSC initiated a contract to complete a side-by side comparison of the FHSA and the GHS. This review will determine which sections of the GHS might be considered for implementation, as well as whether statutory or regulatory changes would be necessary for eventual implementation.

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OSHA History

OSHA Publication Dates:

- Advanced Notice of Proposed Rulemaking – Sept 12, 2006
- Notice of Proposed Rulemaking – Sept 30, 2009

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- 2010 – Hearings held
- The proposal was sent by OSHA to OMB for comment on October 26, 2011.
- OMB completed its review on February 21, 2012.

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Why the Delay(s)?

- Industry concerns about OSHA timetable, namely, requirement to provide retraining within two years, while not being required to update SDS for three years.
- Unclassified Hazards are included even though they are not part of GHS. The OSHA preamble specifically uses combustible dust as an example. Industry says this is a defacto combustible dust rule. Others say that hazardous materials must be included in HAZCOMM, regardless of what "class" they are put in.

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- S & H Professionals concern about dropping references to occupational exposure limits (other than those adopted by OSHA, i.e., TLVs)

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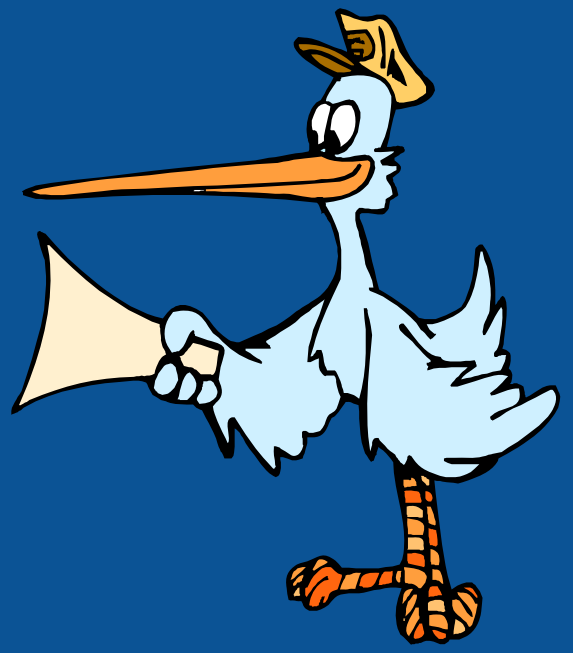
It Arrives !

- Published in *Federal Register* March 26, 2012
- Effective May 25, 2012



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Included

- TLV references
- Red perimeter on all pictogram labels
- IARC and NTP included as references for carcinogenicity
- “Unclassified” now “Not otherwise classified”

Not Included

- Aquatic Toxicity
- Removed Combustible Dust from the general definition of unclassified
- Pictogram for Environmental hazards

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- MNOSHA adopted the standard on September 10, 2012.

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What's it all About?

- System to standardize the way hazardous materials are classified and labeled.
- The same criteria will be used all over the world to determine if a material is flammable, toxic, corrosive, and so on.
- We are then assured if a material is considered toxic in China it will also be so in the USA, Europe, and elsewhere around the Globe.

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- The GHS also harmonizes the way hazards are communicated by means of Warning Labels and Safety Data Sheets.
- The GHS hazard pictograms, signal word and hazard statements should be located together on the label.
- The actual label format or layout is not specified in the GHS.

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- The GHS is intended to replace multiple systems of labeling and classification with a single unified approach.

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How Does it Do That?

- Creates classification processes that use available data on chemicals for comparison with defined hazard criteria;
- More effectively and consistently communicates hazard information, protective measures on labels and Safety Data Sheets (SDS).

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Simply stated…

- A worldwide effort to standard hazardous communication

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Who is Affected?

- Manufacturers
- Suppliers
- Users

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What is Affected?

- Workplace chemicals
- Consumer chemicals
- Pest control products
- Products regulated under the transportation of dangerous goods.
- In the U.S. it is estimated that 5 million workplaces and 40 million workers will be affected.

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Why GHS?

- To have a common worldwide approach to classifying and communicating chemical hazards.
  - Harmonized definitions of hazards
  - Specific criteria for labels
  - Harmonized format for safety data sheets

  - Widespread use of chemicals world-wide, want to avoid sector-specific regulations (transport, production, workplace, trade, consumer products..)

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- For example, a product may be considered flammable or toxic in one country, but not in another to which it is being shipped.
  - Or the reverse!
  - Which side do you want to be on?

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Why GHS?

For example: Flammable classification (by flashpoint)

- OSHA
- Flashpoint = 0-100 F

- DOT
- Flashpoint = 0-140 F

- EU
- Flashpoint – 0-131 F

- GHS
- Flashpoint = 0-140 F

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What Must Be Done?

- Classification using the new GHS criteria
- Labelling using the GHS format, including pictograms/symbols
- **Safety Data Sheets**, using a standardized 16-element format.

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More Specifics

- All Employers
  - Train on new SDS format
    - 16 element format
  - Train on GHS label elements
    - Pictograms
    - Signal words
    - Hazard statements
    - Precautionary statements
  - Continue to maintain the updated SDSs

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By When?

- Dec 1, 2013 - Train employees on the new labeling system and SDS format
- June 1, 2015 - comply with all labeling and SDS requirements (distributors allowed until December 1, 2015)
- June 1, 2016 - fully implement HazCom program and any signs

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Safety Data Sheets

- 1. Identification of the Substance or mixture, and of the supplier
- 2. Hazard identification
- 3. Composition/ingredients
- 4. First-aid measures
- 5. Fire-fighting measures
- 6. Accidental release measures

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Safety Data Sheets

- 7. Handling and storage
- 8. Exposure controls/personal protection
- 9. Physical and chemical properties
- 10. Stability and reactivity
- 11. Toxicological information

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Safety Data Sheets

- 12. *Ecological information* ←**new**
- 13. *Disposal considerations*
- 14. *Transportation information*
- 15. *Regulatory information*
- 16. Other information dates/revision

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GHS Labeling

- Shipped Containers

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GHS Labeling

- Product Identifier
- Pictogram
- Signal Words – “Danger” or “Warning”
- Hazard Statements – standard phrases assigned to a hazard class and category
- Precautionary statement(s) – 4 kinds
- Supplier Information – name, address, phone

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Additional Label Elements

- Supplier Information – name, address, phone
- Supplemental Information –further details

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Pictograms adopted by OSHA

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Exploding Bomb

- Explosives
- Self-reactive substances
- Organic peroxides

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Flame

- Flammables
- Emits flammable gas
- Self-reactive substances
- Pyrophorics
- Self-heating substances
- Organic peroxides

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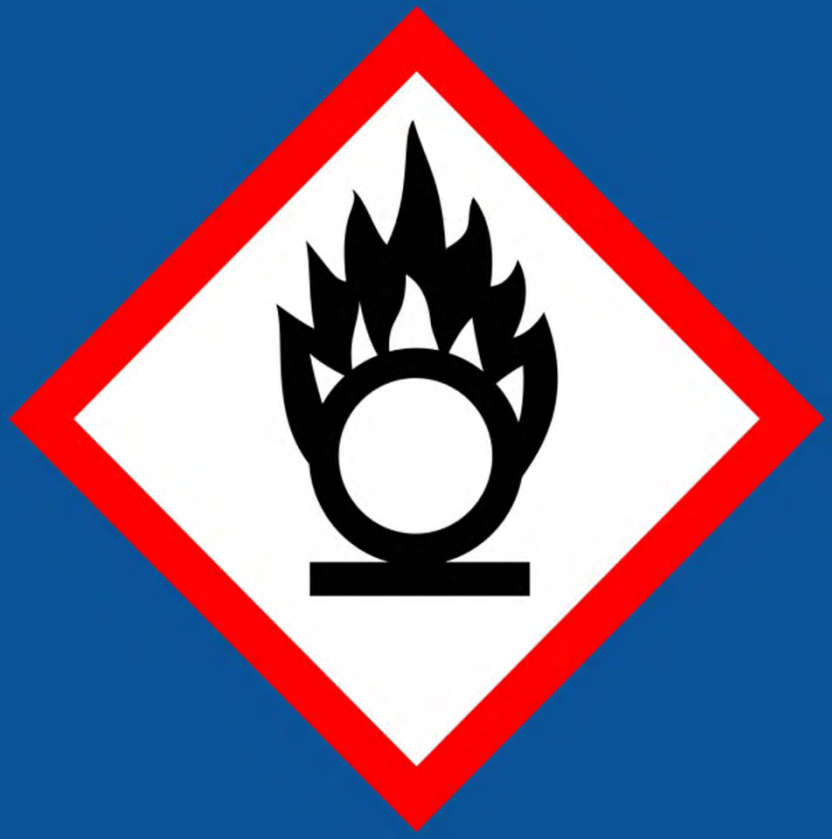

Flame Over Circle

- Oxidizers

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Gas Cylinder

- Gases under pressure

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Corrosion

- Skin corrosion/burns
- Eye damage
- Corrosive to metals

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Health Hazard Pictograms

Skull and crossbones

- Acute toxicity (fatal or toxic)

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Exclamation Mark

- Acute toxicity
- Irritant (skin & eye)
- Skin sensitizer
- Narcotic effects
- Respiratory Tract irritant
- Hazard to ozone layer (non-mandatory)

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Health Hazard

- Carcinogen
- Mutagen
- Reproductive toxicity
- Respiratory sensitizer
- Target organ toxicity
- Aspiration hazard

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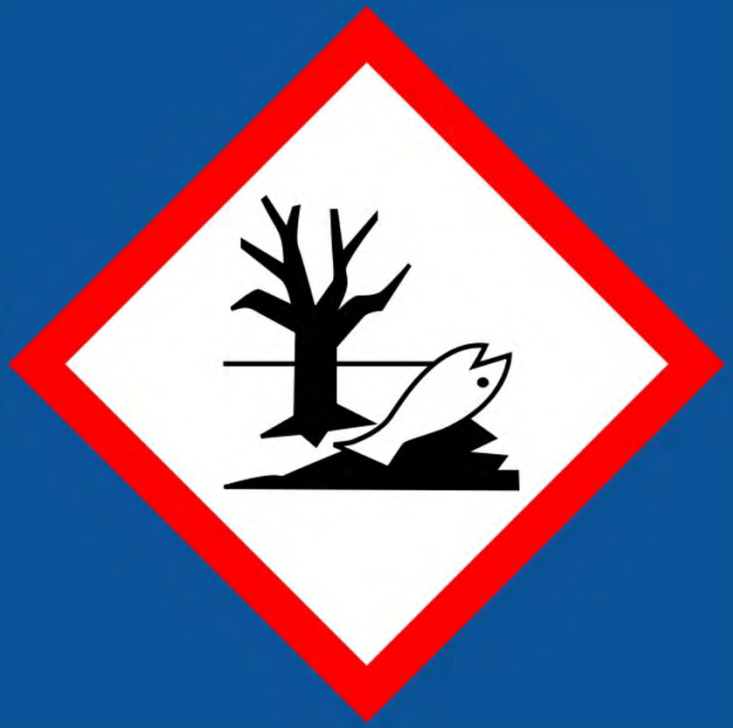
9th Pictogram,

not adopted by OSHA

Environment



Aquatic Toxicity

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Signal Words

- The signal word indicates the relative danger or severity of a hazard. The signal words used in GHS are

- "Danger" for the more severe hazards, and
- "Warning" for the less severe hazards.

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Hazard Statements

- A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical; including, where appropriate, the degree of hazards
  - Fatal if swallowed
  - Toxic if swallowed
  - Harmful if swallowed
  - May be harmful if swallowed
  - Highly flammable liquid and vapor

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Precautionary Statements

- a phrase that describes recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.
  - wear protective gloves
  - wear splash protection for face
  - keep away from heat/sparks/open flame
  - use explosion-proof electrical equipment

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Example label: GHS inner container label (i.e. bottle inside shipping box)

ToxiFlam (Contains: XYZ)

Danger! Toxic If Swallowed, Flammable Liquid and Vapor

Do not eat, drink or use tobacco when using this product. Wash hands thoroughly after handling. Keep container tightly closed. Keep away from heat/sparks/open flame. - No smoking. Wear protective gloves and eye/face protection. Ground container and receiving equipment. Use explosion-proof electrical equipment. Take precautionary measures against static discharge.
Use only non-sparking tools. Store in cool/well-ventilated place.

IF SWALLOWED: Immediately call a POISON CONTROL CENTER or doctor/physician. Rinse mouth.

In case of fire, use water fog, dry chemical, CO_2, or "alcohol" foam.

See Safety Data Sheet for further details regarding safe use of this product.

MyCompany, MyStreet, MyTown NJ 00000, Tel: 444 999 9999

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What about NFPA ?

- All the information required by 1910.1200 must be included
- No strict prohibition, so if there's still room, may include it

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GHS Labeling, Secondary

Secondary Labels

- Need all the information from the original shipping label…

- OR

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Secondary Labels, cont

- Product identifier & words, pictures, symbols which provide at least general information regarding the hazards, and which … will provide the specific information regarding the physical and health hazards

- OR

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Secondary Labels, cont

- Signs, placards, process sheets, batch tickets, operating procedures, etc. for **stationary containers**, as long as they identify the containers to which it is applicable and conveys the information required

- (this is not a change)

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Secondary Labels, cont

- **EXCEPTION**
- Portable, immediate-use containers used by the employee who transferred the chemicals do not have to be labeled.

- (this is not a change)

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Labeling old containers

- Does old stock, with old labels, have to be updated if no further shipments have arrived?

- Yes, end users must be in compliance by June 1, 2016. Labels will need to be replaced or amended as necessary.

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What to do with old MSDS?

- Old MSDS must be kept as required by 1910.1020(d)(1). Employers should note on the copies when they were replaced.

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Training

- In Minnesota, continue annual training
- Training on new labeling and new SDS format, by December 1, 2013
- Continue training new employees upon hire, and retraining when new hazards are present

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Employee Right to Know

What happens to ERTK…???

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First, a short comparison

Minnesota ERTK

- 1. Chemicals
- 2. Physical Agents
- 3. Infectious Agents
- 4. Initial Training
- 5. Retraining when new hazards introduced
- 6. Annual Training
- 7. Written program
- 8. Training records

Federal Hazard Communication

- 1. Chemicals
- 2. Initial Training
- 3. Retraining when new hazards introduced
- 4. Specifications for Safety Data Sheets
- 5. Written program

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First, a short comparison

Minnesota ERTK

- 1. Chemicals
- 2. **Physical Agents**
- 3. **Infectious Agents**
- 4. Initial Training
- 5. Retraining when new hazards introduced
- 6. **Annual Training**
- **7. Written program**
- **8. Training records**
- **↑ keeping these**

Federal Hazard Communication

- 1. Chemicals
- 2. Initial Training
- 3. Retraining when new hazards introduced
- 4. Specifications for Safety Data Sheets
- 5. Written program

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Summary

- GHS criteria affects chemicals
- Clock is ticking – December 1, 2013 is first deadline
- Content may change, but still need to label, still need to have and keep Data Sheets
- Still need to conduct initial and annual training, and have written program, keep training records (3 years)

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Where Can I Get a Copy?

- The full text of GHS is available on the web at: http://www.unece.org/trans/danger/publi/ghs/ghs_rev00/00files_e.html
- The full text of OSHA's rule is on the web at http://www.osha.gov/dsg/hazcom/index.html
- A side-by-side comparison of old vs. new is at http://www.osha.gov/dsg/hazcom/side-by-side.html
- State Register notice of September 10, 2012: http://www.comm.media.state.mn.us/bookstore/

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Even More info

- Watch MNOSHA's *Safety Lines* for further information in the years ahead !
- Anticipating publication of federal OSHA enforcement policy, date tbd

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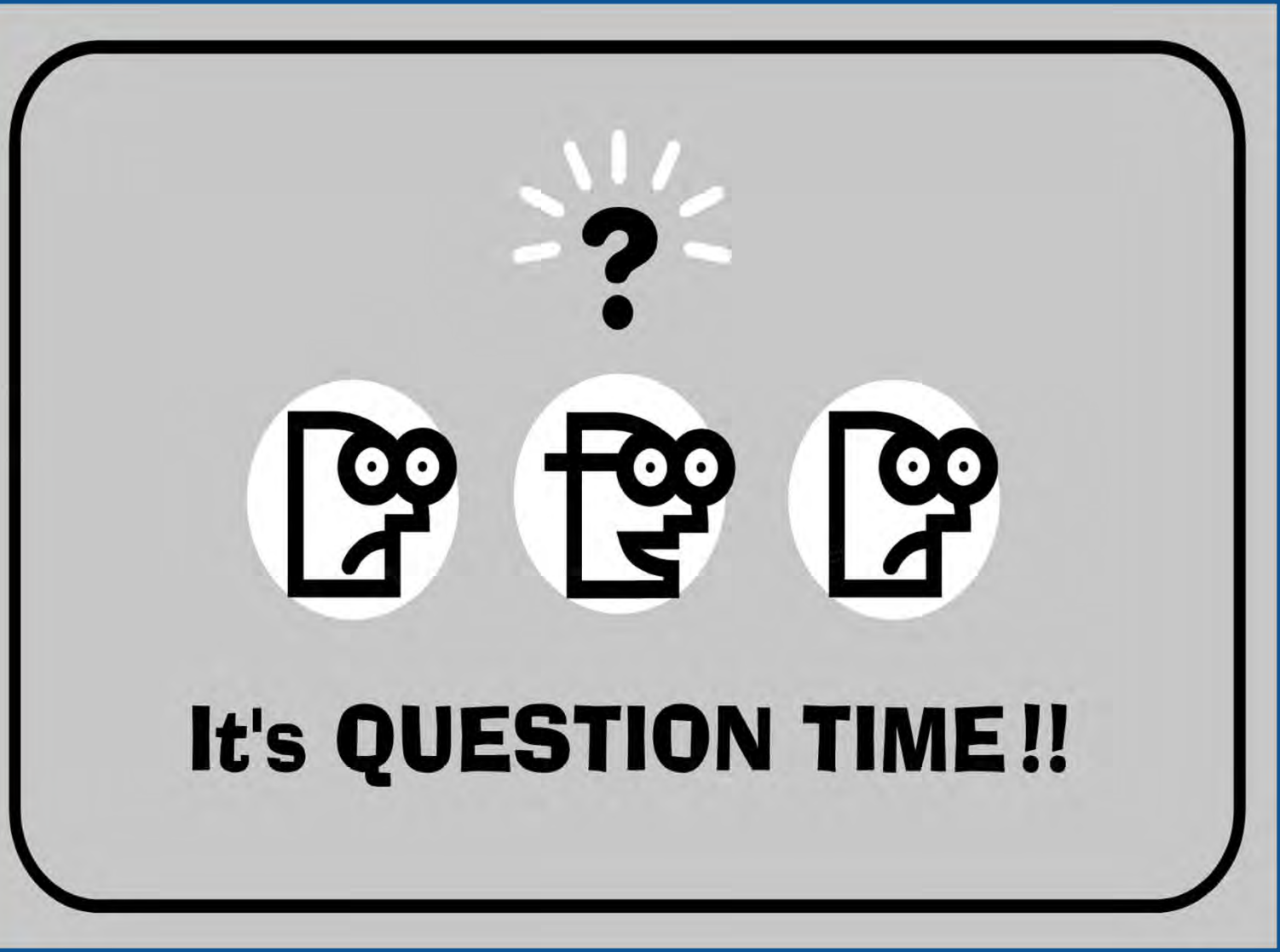

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For more information, contact:

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